

# CURRENT LINE

DAR STATEWIDE PROJECT INFORMATION NEWSLETTER

VOLUME 5, NUMBER 3, December 2001

## LICENSES, RULES & REGULATIONS

### RESULTS OF PUBLIC MEETINGS REGARDING NEW MINIMUM SIZE RULES FOR HAWAII

Mahalo to all the people who came and participated in the public meetings held during the month of August on all the main Hawaiian Islands concerning changes in fishing regulations proposed by the Division of Aquatic Resources (DAR).

We appreciated all your comments at the meetings and your letters, emails and phone calls sharing your mana'o and letting us know how the new rules would affect you. Everyone showed a lot of interest in the discussions that took place. Most of you supported the recommendations, but a few changes were requested. As a result of your input, the following changes were made in the recommendations originally presented:

1) Minimum size of papio for home consumption will be 10 inches (fork length), rather than 12 inches as originally proposed. Minimum size is currently 7 inches (total length), which is too small, since these fish do not reproduce until they are at least 14 to 16 inches in fork length depending on the species. The change in minimum size recommendation represents a compromise, to accommodate people (young and old alike) who target papio for home consumption. Minimum size for sale will be 16 inches. At this size, many of the species that make up the

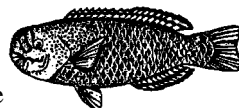


ulua and papio complex are just beginning to reproduce.

2) Minimum size for kumu will be 10 inches fork length, rather than the 11 inches originally proposed. The size at which 50% of kumu are able to reproduce (L50) ranges from 10.3 to 11.4 inches. Since many people felt 11 inches was a bit too high and there was leeway, according to the data DAR had, we were able to lower the size a bit. Talking with fishers, it seems 10 inches will be acceptable. If the rule change works as intended, kumu over 10 inches will gradually become more abundant.



3) A complete ban on night spearing of uhu will not be recommended at this time. Instead, a bag limit looks like a better option. Many individuals and family groups (including youths and children) spear just one or two uhu at night once in awhile. Their impact is not the problem. DAR's concern is regarding the impact of spearing (or even netting) large numbers of uhu, whether at night or during the day time. Therefore, DAR will develop bag limits for uhu, both for recreational/subsistence and commercial fishers.

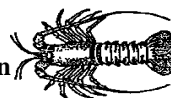


This issue on 'Bag Limits' will be revisited in the second phase of rule changes, which should begin in early 2002. At this time, meetings on 'BAG LIMITS' will be announced where bag limits for various species will be discussed. All other recommended minimum size increases will move forward as proposed.

## REMINDERS

### "Open Season"

#### Spiny Lobster Season Slipper Lobster Season & Kona Crab Season



is now **open** as of September 1st and will run till April 31st. Remember that minimum size for home consumption or sale is as follows:

|                  | Home<br>Consumption                | Commercial<br>Sale                 |
|------------------|------------------------------------|------------------------------------|
| Spiny Lobsters   | 3-1/4 inches<br>carapace<br>length | 3-1/4 inches<br>carapace<br>length |
| Slipper Lobsters | 2-3/4 inches<br>tail width         | 2-3/4 inches<br>tail width         |
| Kona Crab        | no restriction                     | 4 inches long<br>or wide           |

Other restrictions include no spearing, no taking with eggs, animals must be taken whole only and cannot be taken mutilated.

#### Moi & Moi-li'i Season



is now **open** as of September 1st and will run till May 31st. Remember that minimum size for home consumption or sale is 7 inches.

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**Waikiki Diamond Head Fishery Management Area** will be **open** to fishing from January 1, 2002 to December 31, 2002. The area will be closed to fishing from January 1, 2003 to December 31, 2003.

**From November to June halalu** (juvenile akule measuring under 8-1/2 inches in total length) **may be taken with nets that have a minimum mesh size of 1-1/2 inches.**

#### "Closed Season"

**Mullet Season** (for 'ama'ama or striped mullet) is **closed** between December to February. Open Season will resume on March 1st and run till November 30th.

## INSHORE PROJECTS

### ULUA TAGGING PROJECT UPDATE



As the 2001 Uluu/Papio season draws to an end, DAR is grateful and indebted to all of those fishers who have helped us with tagging over 1400 fish so far! The following is a general summary of all that fish that have been tagged and recovered as of 10/17/01:

#### *Tagged and Released Fish*

| Species                  | Number of Fish Tagged | Size Ranges                            | Number of Recoveries |
|--------------------------|-----------------------|--|----------------------|
|                          |                       | of Fish Tagged (inches in fork length) |                      |
| Kahala                   | 824                   | 8 to 52                                | 45                   |
| White Uluu/Papio         | 106                   | 6.75 to 47                             | 9                    |
| Omilu                    | 476                   | 5 to 30                                | 79                   |
| Butaguchi                | 25                    | 20 to 36.5                             | -                    |
| Papa                     | 9                     | 10 to 26.5                             | -                    |
| Gungan (black ulua)      | 1                     | 28                                     | -                    |
| Kagami                   | 2                     | 14 to 32                               | -                    |
| Menpachi (Bigeye)        | 7                     | 6.5 to 15                              | -                    |
| No-Bite                  | 6                     | 6.5 to 21                              | -                    |
| Paopao                   | 2                     | 19.5 to 21                             | -                    |
| <b>TOTAL FISH TAGGED</b> | <b>1458</b>           | <b>TOTAL FISH RECOVERED</b>            | <b>133</b>           |

#### *Number of Participants*

| Individual Fishermen | Fishing Clubs | Charter/Commercial Vessels |
|----------------------|---------------|----------------------------|
| 190                  | 3             | 14                         |

Due to the various range in the numbers of fish tagged and released by Project participants, we would like to acknowledge the tagging effort(s) made by each participant based on the following categories:

#### 100 + Club (over 100 fish tagged)      Papio Division B (1 to 5 fish tagged)

Ho'oheno Furushima      Albert Cabatingau  
Capt. Silas Naig\*      Clay Ching  
Jeffrey E. Rogers\*      Nathan Ching  
Stephen Chun

Uluu Division A (51 to 100 fish tagged)  
Alan Komagome      Brett Fee  
Paul Murakawa      Todd Fuchigami  
William Strickland\*      Chris Gerkin  
Kevin Ishikawa  
Eric Kanemura  
Bernice Kaneshiro  
Kurt Kawamoto

Uluu Division B (11 to 50 fish tagged)  
Reed Kondo  
Wayne Kuwana  
Kevin Kuwaye  
Keith Caldwell      Kent Lindsey  
Joseph Carvalho, Jr.      Wes Masuda  
Kenneth Corder\*      Phillip Munoz  
Capt. Gary Dill\*      Kyle I Nishioka  
Michael Horii      Paul Okouchi  
Kakaako Kasting      Kelvin Otaguro  
Club      Joe Randall  
Dale Leverone\*      Greg Sabate  
Molokai Kine Whipping Club      Don Saito, Jr.  
Jared Say  
Kirk Murakami      Mitchell Taketa  
Capt. Guy Ohara\*      Brealand Tam  
Capt. Ed Timoney\*      Clay Tam  
Corwin Tam

#### Papio Division A (6 to 10 fish tagged)

Ross Tanoue  
Gregory Terry  
Paul Chong\*      Brian Yoshida  
Michael Chun  
Sean Jensen  
Capt. Dane Johnson\*  
Harriet Kahihikolo  
Dennis Kamikawa\*  
Charlie Lindsey  
Floyd Otani  
Cy Otsuka  
Guy Terwilleger\*  
Keoni Walters  
Dalton Wong

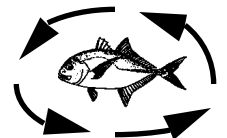
\*denotes commercial or charter captain

#### Recoveries

The following is just some of the key facts taken from the data we've received so far.

#### *Fish Facts for Recovered Fish*

|                                    | Kahala                       | Omilu                                     | White                               |
|------------------------------------|------------------------------|---|-------------------------------------|
| <i>Farthest Distance Traveled:</i> | 100 miles - Kona to Kumukahi | 2.5 miles - Keelhi Lagoon to Kewalo Basin | 2.1 miles - Kewalo Basin to Waikiki |
| <i>Longest Days of Freedom:</i>    | 373 days = 1 yr. & 8 days    | 366 days = 1 yr. & 1 day                  | 213 days = 7 months                 |
| <i>Shortest Days of Freedom:</i>   | 3 days                       | 4 days                                    | 5 days                              |
| <i>Largest Fish Recovered:</i>     | 47 inches fork length        | 16 inches fork length                     | 37 inches fork length               |
| <i>Smallest Fish Recovered:</i>    | 29 inches fork length        | 5 inches fork length                      | 7.5 inches fork length              |



#### Movement Patterns

Out of 133 fish recovered, 22 or so are showing a distinctive pattern of counter clockwise movement around each island. As previously noted by a few fish recovered on the Big Island and Oahu, additional recoveries have reflected this same trend. These fish have traveled from between less than 1 mile to 48 miles. Not all fish have traveled this route. An additional 11 recovered fish have showed movement in a clockwise direction traveling distances of less than a mile to 5 miles. The remaining 100 recoveries occurred within less than a mile or within the same location where they were originally tagged and showed no distinct pattern of movement.

On Oahu, the Uluu run sort of follows this counter clockwise movement usually starting in April on the south shore and making its way around Makapuu to Kaneohe throughout the summer, then on toward the north shore around winter. Some say this phenomena might be associated with surf patterns around the state.

An old time fisherman also observed this behavior with mullet. During the month

of November through December large schools of mullet would leave Pearl Harbor basin and migrate toward Diamond Head. As these large schools of mullet moved along the outer reef edge, they were observed to be spawning. These ripe fish along with aggressive spawning behavior would attract ulua and shark to the reef. By March, scattered mullet would be observed returning to Pearl Harbor.

### How much food do papio need to eat?

According to a growth study done on some white papio back in the 1980s, the following table should give you an idea of how much food a papio needs to eat in order to grow:

|                            | <i>Group A<br/>White Papio</i> | <i>Group B<br/>White Papio</i> |
|----------------------------|--------------------------------|--------------------------------|
| Starting Length and Weight | 7 inches<br>1/4 lbs            | 10-3/4 inches<br>1 lbs         |
| Ending Length and Weight   | 9-3/4 inches<br>3/4 lbs        | 12-1/2 inches<br>1.5 lbs       |
| Feeding Time Duration      | 171 days<br>(=5-1/2 months)    | 171 days (=5-1/2 months)       |
| Length Gain                | 2-3/4 inches                   | 1-3/4 inches                   |
| Weight Gain                | 1/2 lbs                        | 1/2 lbs                        |
| Total Amount of Food Eaten | 4 lbs                          | 7 lbs                          |

These fish were studied in captivity so the growth rate and the amount of food needed for growth may be somewhat underestimated. Even so, if it takes 4 lbs of food for a 7 inch papio to grow 2-3/4 inches and gain weight from about 1/4 lb to 1/2 lb or if it takes 7 lbs of food for a 10-3/4 inch papio to grow 1-3/4 inches and go from 1 lb to about 1-1/2 lbs in size, can you imagine how many oamas these fish have to eat???? So the big question is: "How many oamas would it take for a 7 inch, 1/4 lb. papio to grow 2-3/4 inches and gain a 1/2 lb?"

| <i>Food Items</i>    | <i>Am't of Food Needed for 7" papio to grow to 9-3/4" and gain 1/2 lb</i> | <i>Am't of Food Needed for 10-3/4" papio to grow to 12-1/2" and gain 1/2 lb</i> |
|----------------------|---|---|
| <b>oama</b> (10 g.)  | 180   | 315   |
| <b>opae</b> (0.2 g.) | 9100  | 16,000  |

Based on recovery information, the papio appear to grow the same amount in length over a period of 1 to 2 months in the wild rather than spread out over 5. months in captivity. These growth spurts seem to occur when the bait (e.g. oama) come in or are available. Recovered fish during the off season have shown little or no growth even though they have been at liberty for 3 months or more. Perhaps this feast or famine behavior explains why the ulua and papio are more readily caught during the same time as when the bait comes in - THEY'RE HUNGRY!!!

### Other Observations

Some of our volunteers have been steadily tagging papio in a certain area along the south shore of Oahu. Based on their tag and recovery efforts, they've noticed juvenile omilu just under 6 inches in length would come in and hang around until they reached about 13 inches in length. At this length they appear to leave this area. This is about the size that omilu begin reaching sexual maturity and they may begin foraging for other food items off shore. This growth from 6 to 13 inches occurred between March and August of this year. In September, a new group of recruits in the 5" to 6" range appeared and seemed to have moved in to the same spot. The previous group of omilu seems to have moved from this spot. It is not known yet whether this new group of omilu is next year's recruits or whether there are 2 size/age classes of omilu that move into the area each year. Only time and continued tagging efforts will tell us the story.

It's information like this that we're looking for with this project. We are always looking for as many volunteer taggers as we can get because the more concentrated tagging effort we get, the better and more interesting information we can get and share with everyone. It's information like this that can give us insight into how to improve the ulua and papio fishery for everybody. If you have any questions or would like to participate as a volunteer fisherman in DAR's Ulua Tagging Project, please contact Annette Tagawa or Clay Tam on Oahu at (808) 587-0593. You can also email us at:

**uluatagging@exec.state.hi.us**

Again, **MAHALO** for all of your tagging and recovery efforts! This project would not be possible without the help

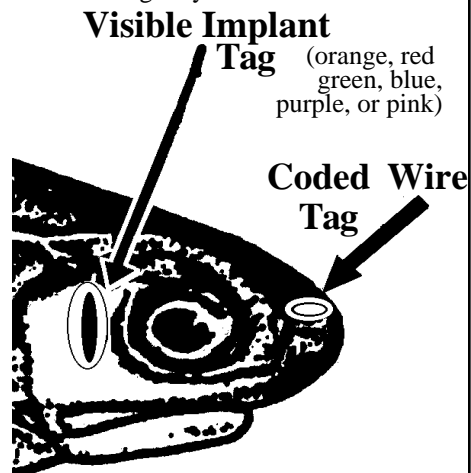
from Hawaii's fishermen and women. Keep up the good work, everyone and keep that data coming in!

### MOI STOCK ENHANCEMENT/ TAGGING PROGRAM UPDATE



The Division of Aquatic Resource's Anuenue Fisheries Research Center has been releasing hatchery reared, tagged juvenile moi along the southern coast of Oahu (Waikiki-Diamond Head Shoreline Fisheries Management Area) and along the eastern coast of Maui (Ke'anae) since November 1999 as part of the State of Hawaii's ongoing coastal stock enhancement program.

This past summer, slightly over 10,000 hatchery reared moilii were released within the Waikiki-Diamond Head Shoreline Fisheries Management Area. These fish should reach the minimum catch size of 7 inches by the opening fishing season in the area beginning January 1, 2002. Another 10,000 moi were released earlier in November '99. Prior to their release, each moi was tagged with a fluorescent elastomer stripe (VI or Visible Tag) in the clear tissue behind the left or right eye:



Various colors (e.g. red, green purple, etc.) were used for easier visibility and identification for fishermen. In addition to the visible tag, an internal coded wire tag (CWT) was inserted into the snout of the moi. The CWT contains a microscopic code that provides important biological and behavioral information such as date of release, size-at-release and site release location.

Some of the tagged moi were released within the Waikiki-Diamond Head Fisheries Management Area within the vicin-

ity of the Natatorium. Recapture efforts seem to indicate that the moi had a greater tendency to migrate westward (clockwise) toward the direction of the Ilikai Hotel. Another batch of moi that was released at Leahi Park (one of the mini parks located near Diamond Head) and recaptured also indicated a westward migration toward Waikiki. It is not known whether the moi are searching for more suitable habitat or if there are other reasons for this migration pattern. Further studies and recaptures over time will hopefully give us a better picture of the moi resources.

If you happen to catch ANY moi on Oahu or Maui, please call the Division of Aquatic Resource's Oahu Moi Hotline (808) 832-5003 or contact Thomas Iwai Jr. at (808) 832-5008. The information we are looking for is as follows:

- 1) Date caught
- 2) Location caught (general area i.e. Kahuku)
- 3) Length (total length)
- 4) Weight (if possible)
- 5) Gear type used
- 6) Time caught

### YOU KEEP THE FISH!

For more information or if you have any questions regarding DAR's Moi Stock Enhancement Program, please call Tom at (808) 832-5008.

## FRESHWATER FISHING

### NOELANI SCHOOL INVESTIGATES BIOLOGY OF INTRODUCED GRASS SHRIMP IN MANOA STREAM



Within the last decade, it's been noticed that several streams on Oahu have an abundance of tiny shrimp that are about an inch in length. At first glance, these shrimp may be mistaken for the native opae, Atyoida bisulcata, until you take a closer look at them. These shrimp are known as "grass shrimp" or Neocaridina denticulata sinensis. The appearance of these shrimp in Hawaiian streams seemed to coincide with the sale of these species as "feeder shrimp" in pet shops during the early 90's. Sadly, if you find large numbers of shrimp in any Oahu stream, particularly on the leeward side, it will most likely be the grass shrimp.

Grass shrimp are related to the native opae so there is some concern that it may compete with the native opae for food and living space, especially since they are able to quickly colonize stream habitats. Virtually little was known about how much of an impact these introduced shrimp have on native stream ecosystems. The 5th and 6th Grade class of Noeleani Elementary School took on the task of trying to find out more about the biology of the grass shrimp in the spring of 2001 by doing some rearing experiments in the classroom. DAR provided them with some grass shrimp, a 10-gallon tank, a small pump, a sponge filter, and a pair of calipers for measuring the shrimp. Their task was to maintain the shrimp broodstock in the tank and to catch out and isolate any berried females. Their objective was to find the answers to the following questions: 1) What is the average number of baby shrimp produced by female shrimp?, 2) How long does it take the shrimp to reach sexual maturity?, 3) How fast do they grow?, and 4) Does the presence of shelter (tree roots, grass, aquatic plants, etc.) increase the number of baby shrimp that survive to adulthood?

So far, the students have found that a female grass shrimp can hatch an average brood of about 100 individuals and that it takes three months for a shrimp to reach sexual maturity. This is in contrast to the opae kalaole, which takes over 1 year to reach sexual maturity. A mature female opae kalaole can carry anywhere from 73 to 3557 eggs at a time depending on the size of the shrimp. This relationship also occurs with grass shrimp where the larger shrimp are able to carry more eggs than a smaller one. Based on the information that Noelani students have discovered, by the end of one year, one grass shrimp will have produced 102,030,400 sexually mature individuals whereas one opae kalaole will take over one year to produce only 3557 individuals at the most. It's no wonder that the grass shrimp can be considered a threat to the native opae! Can you imagine the impact these shrimps must have on the ecosystem in Manoa Stream, or better yet, how much food is being provided for other non-native fishes and helping them to proliferate?

The hard work and dedication of Phyllis Murakami-Siu's 5th and 6th grade class won them 2nd place in the 2000-01 Hawaii Needs Care Awards sponsored by the Moanalua Gardens Foundation. In addition, their excellent presentation earned them a trip to Japan where two student representatives along with their teacher were asked by the local Environmental Protection Agency office to represent the U.S. at an Eco-Club Conference. DAR would like to congratulate Phyllis Murakami-Siu's 5th and 6th grade class at Noelani Elementary School on a job well done and to thank them for helping us gain some insight on the impacts that the grass shrimp are having in Manoa Stream

## OFFSHORE FISHERIES

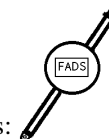
### OPAKAPAKA TAGGING UPDATE



A Big Island fisherman reported the recapture of a tagged opakapaka on September 28, 2001 off of the Hawaii Volcanoes National Park. The specimen weighed 8 pounds and was 26.75 inches in total length. The fish was tagged on March 1, 1994 off Molokai and measured 14 inches in fork length. This animal was then released and remained in the wild for 2,768 days (7.6 years), grew 10.5 inches, and traveled at least 210 nautical miles! Even more astonishing - it crossed the Alenuihaha Channel. At its narrowest, this channel is 27 nautical miles and is characterized by depths of well over 1,000 fathoms! Pretty impressive for a small fish.

### FAD PROJECT

Here is the most recent update of missing FADs:

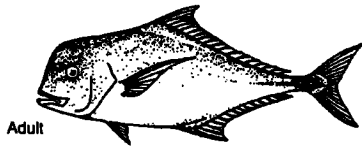


**MISSING FADs** (as of Nov. 8, 2001):

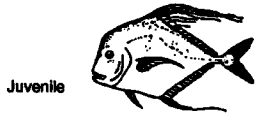
| FAD | Location | Island |
|-----|----------|--------|
| WK  | Waialua  | Kaua'i |
| BB  | Molokaa  | Kaua'i |
| EK  | Hanalei  | Kaua'i |

For current locations and/or more information, contact Warren Cortez at 848-2939. Also, if you know of any FADs that broke loose, see any light out or have any other comments, please give Warren a call.

## FISH FACTS



Adult



Juvenile

### *Alectis ciliaris*

(Mirror Trevally, Threadfin Jack, Kagami)

#### SIZES

**Length:** specimens can reach lengths of up to 59 inches

**Weight:** can reach up to 50.71 pounds

#### BREEDING

**Sexual Maturity:** Unknown

**Spawning:** unknown

#### LIFESTYLE

**Habitat:** Juveniles may be found near the shore in bays and shallow waters. Adults more commonly found offshore in midwater to near bottom to depths of 190+ feet.

**Diet:** Feeds on slow moving crustaceans and occasionally small crabs and fishes.

**Life Span:** unknown

**Distribution:** Worldwide in tropical seas..

#### RELATED SPECIES

The kagami is a member of the Jack Fish Family which includes other species such as the white ulua, omilu, papa, butaguchi, kahala, omaka, opelu, akule, lae and rainbow runner, just to name a few. Most fishes in this group are considered good food fishes supporting valuable commercial and sport fisheries in Hawaii. However, juvenile kagami are better known for its beauty as an aquarium fish with its shiny diamond shaped body with long trailing filaments from its dorsal and anal fins. As these fish age and grow, these trailing filaments shorten in length.

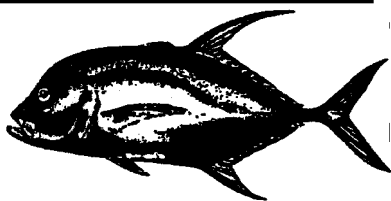
Adult kagami are caught once in a while by local fishermen. The state record catch was taken by a fish weighing in at 48 pounds.

The following table will give you a general idea on the relationship of length to weight on this species. Presently there is no information on its growth rate in relation to age. Please note that these are just ball park figures and meant only to give you a general idea on the relationship of length & weight. ,

#### Length and Weight of Kagami

| Total Length (inches) | Weight (pounds) | Age (years) |
|-----------------------|-----------------|-------------|
| 6                     | 0.12            | unknown     |
| 10                    | 0.5             | "           |
| 12                    | 0.75            | "           |
| 14                    | 1               | "           |
| 18                    | 2               | "           |
| 20                    | 3               | "           |
| 23                    | 4               | "           |
| 28                    | 7               | "           |
| 32                    | 10              | "           |
| 37                    | 14              | "           |
| 40                    | 18              | "           |
| 43                    | 22              | "           |
| 46                    | 26              | "           |
| 49                    | 31              | "           |
| 53                    | 38              | "           |
| 55                    | 42              | "           |
| 57                    | 46              | "           |

## FISH FACTS



### *Caranx lugubris*

(Black Trevally, Gungkan, Black Ulua, Ulua la'uli)

#### SIZES

**Length:** specimens can reach lengths of up to 39 inches in length

**Weight:** can reach up to 35 pounds

#### BREEDING

**Sexual Maturity:** fish are sexually mature at about 5.1 years of age

**Spawning:** unknown

#### LIFESTYLE

**Habitat:** Considered an offshore fish usually seen on the outer reef slopes at depths of over 100 ft., although its depth range is between 21 to 193 fathoms..

**Diet:** Feeds on fishes at night.. Also eats crustaceans

**Life Span:** maximum known age 24 years

**Distribution:** Circumtropical - distributed throughout the tropics worldwide

#### RELATED SPECIES

The black ulua is a member of the Jack Fish Family which includes all species of ulua and papio as well as kahala, rainbow runner, lae, akule and opelu. The black ulua is considered a prized specimen among recreational fishermen not necessarily for its size, but because it's not all that common. It is occasionally caught by deepsea bottomfishermen and very rarely by shoreline fishermen. It is said to be a very good eating fish. In Japan, it is highly prized as a food fish because of its high fat content. As of October 1999, none has been submitted as a state record for the largest black ulua caught..

Often times, the white ulua is commonly mistaken for the black ulua because some of them are nearly black in color, particularly mature males. You can distinguish the black ulua from the white ulua by the presence of the black colored scutes and the slightly concave head shape. Also, the tips of the second dorsal fin and anal fin are long and pointed. The following table will give you a general idea on the relationship of length, weight and age on this species. Please note that these are

just ball park figures and meant only to give you a general idea on the relationship of length, weight, and age,

#### Length, Weight and Age of Black Ulua

| Fork Length (inches) | Weight (pounds) | Age (years)     |
|----------------------|-----------------|-----------------|
| 6                    | 0.2             | 0.4 (=5 months) |
| 8                    | 0.4             | 1               |
| 10                   | 0.7             | 1.5             |
| 12                   | 1.25            | 2               |
| 14                   | 2               | 3               |
| 16                   | 3               | 3.5             |
| 18                   | 4               | 4               |
| 20                   | 6               | 5               |
| 23                   | 9               | 6.5             |
| 24                   | 10              | 7               |
| 26                   | 13              | 8               |
| 28                   | 16              | 10              |
| 30                   | 19              | 12              |
| 32                   | 23              | 14              |
| 35                   | 31              | 19              |
| 37                   | 36              | 22              |

The Department of Land and Natural Resources receives financial support under the Federal Aid in Sport Fish Restoration and other federal programs. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and the laws of the State of Hawaii, the U.S. Department of the Interior and the State of Hawaii prohibit discrimination on the basis of race, color, religion, sex, national origin, age, and disability. If you believe that you have been discriminated against in any program, activity or facility, or if you desire information, please write to: Affirmative Action Officer, Personnel Office, Department of Land and Natural Resources, 1151 Punchbowl Street, Rm. 231, Honolulu, HI 96813, or the U.S. Fish & Wildlife Service, Office for Human Resources, 1849 C Street NW, Room 3058, Washington, D. C. 20240.